

1. (Amended) A calculator, comprising:

(a) means for recognizing handwritten input, wherein the handwritten input comprises a mathematical expression and the mathematical expression is comprised of operators and operands;  
[ and ]

(b) means for displaying the mathematical expression on the calculator so that all of the operands and operators are simultaneously displayed; and

[ (b) ] (c) means for performing calculations indicated by the [ mathematical ] operators and operands in the mathematical expression.

2. (Amended) A calculator, comprising:

(a) an electronic input surface;

(b) a stylus for tracing on the electronic input surface;  
and

(c) a processing circuit, coupled to the electronic input surface, for recording movements of the stylus as it traces across the electronic input surface, for recognizing the recorded movements of the stylus as characters, for converting the characters into mathematical expressions comprised of operands and operators, for displaying the mathematical expression on the calculator so that all of the operands and operators are simultaneously displayed, and for performing calculations indicated by the operands and operators in the mathematical expressions.

sub B<sup>12</sup> 3. (Amended) A method of performing calculations in a calculator having an electronic input surface, a stylus for tracing across the electronic input surface, an electronic monitor, and a processing circuit coupled to the electronic input surface, the method comprising the steps of:

a<sup>2</sup> (a) recording movements of the stylus in the processing circuit, as the stylus is traced across the electronic input surface;

(b) recognizing the recorded movements of the stylus as characters in the processing circuit;

(c) converting the characters into mathematical expressions comprised of operands and operators in the processing circuit;  
[ and ]

(d) displaying the mathematical expression on the electronic monitor so that all of the operands and operators are simultaneously displayed;

[ (d) ] (e) performing calculations indicated by the mathematical expressions in the processing circuit; and

(f) displaying a result of the performed calculations on the electronic monitor.

5. (Amended) The invention as set forth in claim [ 4 ] <sup>3</sup>,  
further comprising the step of displaying the recorded movements  
of the stylus on the electronic monitor.

6. (Amended) The invention as set forth in claim [ 5 ] <sup>3</sup>,  
wherein the electronic monitor is the electronic input surface.

<sup>2</sup>  
a<sup>2</sup> 8. (Amended) The invention as set forth in claim [ 7 ] <sup>1</sup>/<sub>2</sub>,  
wherein the operands comprise symbols.

<sup>3</sup>  
9. (Amended) The invention as set forth in claim [ 7 ] <sup>1</sup>/<sub>2</sub>,  
wherein the operands comprise digits.

<sup>5</sup>  
a<sup>3</sup> 11. (Amended) The invention as set forth in claim [ 7 ] <sup>1</sup>/<sub>2</sub>  
above, further comprising the step of recognizing mathematical  
expressions traced horizontally and vertically on the electronic  
input surface.

<sup>6</sup>  
12. (Amended) The invention as set forth in claim [ 7 ] <sup>1</sup>/<sub>2</sub>  
above, further comprising the step of computing a result for the  
calculations when the user traces a result operator on the  
electronic input surface.

23. (Amended) The invention as set forth in claim 17 above, further comprising the step of re-computing at least two mathematical expressions logically linked together, thereby incorporating a result of a first calculation into a second calculation.

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O 24. (Amended) The invention as set forth in claim 17 above, further comprising the step of re-computing first and second mathematical expressions logically linked together, wherein the first and second mathematical expressions are on separate pages displayed on an electronic monitor, thereby incorporating the result of the first mathematical expression into the second mathematical expression.

25. (Amended) The invention as set forth in claim 17 above, further comprising the step of re-computing first and second mathematical expressions logically connected together, wherein the first and second mathematical expressions are in separate applications executed by the processing circuit, thereby incorporating the result of the first mathematical expression into the second mathematical expression.

26. (New) The invention as set forth in claim 3 above, further comprising the step of accepting marks traced by the stylus on the electronic input surface to annotate and label the recorded movements.

27. (New) The invention as set forth in claim 3 above, further comprising the step of accepting insertions in the mathematical expressions traced by the stylus on the electronic input surface.

28. (New) The invention as set forth in claim 3 above, further comprising the step of accepting deletions in the mathematical expressions traced by the stylus on the electronic input surface.

a<sup>4</sup> 29. (New) The invention as set forth in claim 3 above, further comprising the step of accepting erasures in the mathematical expressions traced by the stylus on the electronic input surface.

30. (New) The invention as set forth in claim 2, wherein an electronic monitor is coupled to the processing circuit, and further comprising means for displaying a result of the performed calculations on the electronic monitor.

B 31. (New) The invention as set forth in claim 2, wherein the operands comprise symbols.

32. (New) The invention as set forth in claim 2, wherein the operands comprise digits.

33. (New) The invention as set forth in claim 32 above, further comprising means for recognizing numbers from the relative placement of the digits, so that when the digits are traced horizontally in close proximity to one another on the electronic input surface, they are considered to be a single number.

34. (New) The invention as set forth in claim 2 above, further comprising means for recognizing mathematical expressions traced horizontally and vertically on the electronic input surface.

35. (New) The invention as set forth in claim 2 above, further comprising means for computing a result for the calculations when the user traces a result operator on the electronic input surface.

36. (New) The invention as set forth in claim 35 above, wherein the result operator is an equal sign in a horizontal mathematical expression.

37. (New) The invention as set forth in claim 35 above, wherein the result operator is a result line in a vertical mathematical expression.

38. (New) The invention as set forth in claim 2 above, further comprising means for animating expressions on the electronic input surface as they are being calculated.

39. (New) The invention as set forth in claim 2 above, further comprising means for accepting corrections in the mathematical expressions traced by the stylus in the electronic input surface.

a 4 38. (New) The invention as set forth in claim 2 above, further comprising means for logically linking together a plurality of mathematical expressions inscribed on the electronic input surface.

41. (New) The invention as set forth in claim 40 above, wherein the mathematical expressions are linked in response to their proximity to one another on the electronic input surface.

42. (New) The invention as set forth in claim 40 above, wherein the mathematical expressions are linked in response to a user tracing a linking operator on the electronic input surface.

43. (New) The invention as set forth in claim 42 above, wherein the linking operator is an arrow having a tail proximal a first operand or mathematical expression and a head proximal a second operator or mathematical expression.

44. (New) The invention as set forth in claim 43 above, wherein a result from the first mathematical expression is an operand in the second mathematical expression.

45. (New) The invention as set forth in claim 43 above, further comprising means for re-computing the second mathematical expression when the first mathematical expression is altered on the electronic input surface.

a<sup>4</sup> 46. (New) The invention as <sup>B</sup>set forth in claim 40 above, further comprising means for re-computing at least two mathematical expressions logically linked together, thereby incorporating a result of a first calculation into a second calculation.

47. (New) The invention as set forth in claim 40 above, further comprising means for re-computing first and second mathematical expressions logically linked together, wherein the first and second mathematical expressions are on separate pages displayed on an electronic monitor, thereby incorporating the result of the first mathematical expression into the second mathematical expression.



48. (New) The invention as set forth in claim 40 above, further comprising means for re-computing first and second mathematical expressions logically connected together, wherein the first and second mathematical expressions are in separate applications executed by the processing circuit, thereby incorporating the result of the first mathematical expression into the second mathematical expression.

a 4 49. (New) The invention as set forth in claim 2 above, further comprising means for accepting marks traced by the stylus on the electronic input surface to annotate and label the recorded movements. B

50. (New) The invention as set forth in claim 2 above, further comprising means for accepting insertions in the mathematical expressions traced by the stylus on the electronic input surface.

51. (New) The invention as set forth in claim 2 above, further comprising means for accepting deletions in the mathematical expressions traced by the stylus on the electronic input surface.